

REMARKS

The Office Action mailed on April 18, 2007 has been carefully considered. Reconsideration and allowance of the subject application, as amended, are respectfully requested. Claims 1-3, 5-6, 8-9, 12-13, 16-23, 25, 27-30, and 33-34 are currently amended in this application. Claims 7, 10, 24, 26, and 32 have been cancelled. As a result, claims 1-6, 8-9, 11-23, 25, 27-31, and 33-34 are still pending in this application.

Claim Objections

Claims 1-30 were objected to because of numerous informalities. These claims have been amended for clarification purposes and are now believed to be in a format suitable for examination.

35 USC § 112 Rejection of the Claims

Claims 1-18 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner objected to the lack of structure in independent claim 1. Claim 1 has been amended to correct the deficient structure and is now believed to be in accordance with 35 USC 112, second paragraph.

35 USC § 101 Rejection of the Claims

Claims 19-29 were rejected under 35 USC § 101 because the claimed invention was indicated to be directed to non-statutory subject matter. Claim 19 has been amended to recite “An article comprising a storage medium having stored thereon instructions that when executed by a computer result in the following.” No further correction is believed necessary.

35 USC § 102 Rejection of the Claims

Claims 1, 3-4, 6-9, 11, 18-19, 21, 23-25, and 29 were rejected under 35 USC § 102(e) as being anticipated by Fan et al. (U.S. Patent No. 6,389,019 B1). Claims 1-2, 5, 16-17, 19-20, and 22 were rejected under 35 USC § 102(e) as being anticipated by Rose (U.S. Patent No. 6,519,595 B1) and claims 1, 12-13, 19, 27-28 were rejected under 35 USC § 102(e) as being anticipated by

Malaney et al. (U.S. Publication No. 2002/0039349 A1). Applicants' independent claims 1 and 19 have been amended to incorporate the subject matter of dependent claims 10 and 26 respectively. Thus, Applicants respectfully submit that these rejections are now moot.

35 USC §103 Rejection of the Claims

Claims 10 and 26 were rejected under 35 USC § 103(a) as being unpatentable over Fan et al. (U.S. Patent No. 6,389,019 B1) further in view of Malaney et al. (U.S. Publication No. 2002/0039349 A1). The subject matter of claims 10 and 26 has been incorporated into Applicants' independent claims 1, 19, and 30. Applicants' independent claim 1 is provided below for the Examiner's convenience.

1. A system to process packets received over a network, the system comprising:
a receiver configured to receive a plurality of data packets, each data packet belonging to at least one flow;
a transmitter configured to transmit the plurality of data packets received by the receiver;
a scheduler configured to populate at least one schedule of flow service based, at least in part, on quality of service characteristics associated with the at least one flow, the at least one schedule of flow service configured to identify a plurality of different flow candidates for service, the at least one schedule of flow service including a schedule wheel having a collection of slots, an individual slot including an array of entries corresponding to different egress ports, the scheduler further configured to schedule service of the at least one flow based, at least in part, on a port bandwidth vector associated with an egress port used to transmit packets, individual elements within the port bandwidth vector identifying whether the egress port has been reserved for transmission, individual elements within the port bandwidth vector corresponding to different slots within the schedule wheel; and
a shaper configured to access the schedule wheel to select from the plurality of different flow candidates. (Emphasis Added).

Thus, Applicants' newly amended independent claim 1 includes a scheduler configured to "schedule service of the at least one flow based, at least in part, on a port bandwidth vector associated with an egress port used to transmit packets." The port bandwidth vector includes individual elements, which correspond to different slots within the schedule wheel, which identify whether the egress port has been reserved for transmission. The Examiner admits that Fan does not teach or suggest a port bandwidth vector and relies upon Malaney as teaching this limitation of Applicants' newly amended claim 1. Specifically, the Examiner relies upon paragraph [0047] of Malaney, which is provided below for the Examiner's convenience.

[0047] The mathematical formulation described by equations (1)-(10) can be applied to a telecommunications network application, and in particular a Call Admission Control (CAC) procedure on an ATM VBR link. An arrangement is considered in which a Network Management Administrator (NMA) is managing a network node having n input links, and a single output link with rate R bits/s. If the input links are to be scheduled for transmission over the output link in such a manner that the desired QoS requirements for each input link arm to be satisfied, then the Network Management Administrator must allocate a requisite amount of available network bandwidth to each of n corresponding users. When a new user appears and requests a specific QoS for his new traffic stream, the Network Management Administrator must decide, typically in real time in a practical network situation, whether the resources are available to accommodate this new request. This is the CAC procedure. For the purposes of the following analysis, all existing and new traffic sources are assumed to possess well defined ALMGF $\Lambda(\theta)$. (Emphasis Added).

The Examiner cites the underlined passages of paragraph [0047] as teaching, *inter alia*, a scheduler configured to “schedule service of the at least one flow based, at least in part, on a port bandwidth vector associated with an egress port used to transmit packets.” Applicants respectfully disagree with this characterization of Malaney.

Applicants are unable to find reference to a scheduler configured to “schedule service of the at least one flow based, at least in part, on a port bandwidth vector associated with an egress port used to transmit packets” in this passage, or any other passage of Malaney. Malaney merely describes satisfying “desired QoS requirements” by allocating “a requisite amount of available network bandwidth to each of n corresponding users.” Malaney, para. [0047]. Malaney does not appear to teach or suggest the use of a port bandwidth vector. Further, Malaney does not appear to teach or suggest a port bandwidth vector having “individual elements within the port bandwidth vector corresponding to different slots within the schedule wheel” as required by Applicants’ newly amended independent claim 1.

Since neither Fan nor Malaney teach or suggest all of the limitations of Applicants’ newly amended claim 1, Applicants respectfully submit that claim 1 is in condition for allowance. Similarly, since claims 19 and 30 have been amended to include similar limitations, Applicants respectfully submit that newly amended claims 19 and 30 are in condition for allowance as well.

Since claims 2-6, 8-9, 11-18, 20-23, 25, 27-29, 31, and 33-34 depend, either directly or indirectly from Applicants’ newly amended independent claims 1, 19 and 30, Applicants respectfully submit that these claims are in condition for allowance as well.

Applicants respectfully submit that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney (603-668-6560) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 50-2121.

Respectfully submitted,

SURESH S KALKUNTE ET AL.

By their Representatives,

Customer No. 45459

Telephone Number: 603-668-6560

By / Edmund P. Pfleger /
Edmund P. Pfleger
Reg. No. 41,252